

FOR D412-FU2043

Work Order ID 66144

Monday, February 07, 2011 11:08:21 AM



Page 1

Item ID: D3391-023

Accept



Setup Start



Revision ID:

Item Name: Mid Tube Assembly

Stop



Start Date: 2/7/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/7/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3391	Rev H
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100	0.00
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Skidtubes

Skidtubes

Memo

0.00

1-Cut tube to finish length as per Dwg D3391

2-Identify as D3391-023

3-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

4-Open saddles and GHW holes to Ø0.375" except for fwd saddle hole of detail "J"

5-Remove .030" from Fwd indexing Ridge as per Dwg D3391

6-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391

7-Deburr

8-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,

9-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (14 holes) as per Dwg D3391 and 2 holes in section Detail "J", do not open wearplate holes of section "J"

10-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.297" (20 holes) as per Dwg D3391

BB 11-2-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 66144

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Page 2

Item ID: D3391-023**Accept****Setup Start****Revision ID:****Stop****Item Name:** Mid Tube Assembly**Start Date:** 2/7/2011 **Start Qty:** 1.00**Cust Item ID:****Required Date:** 2/7/2011 **Req'd Qty:** 1.00**Customer:****Reference:****Approvals:** **Process Plan:****Date:****Tooling:****Date:****Run Start****QC:****Date:****SPC (Y/N):****Date:****Stop****Sequence ID/
Work Center ID****Operation
Description****Set Up/
Run Hours****Tool ID****Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

11-Open .375" holes to .438" ***do not open fwd saddle holes***

12-Locate D3391-021 in D3391-023 at 9.00" (see view z-z)

13- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drill .188" dia hole, using t-pins and elicos to ensure perfect alignment, open up previously transfer drilled pilot holes in D3391-023/-021 to 0.438" dia. in D3391-021

14- Transfer drill 2 wearplate holes into D3391-021 using DT8217, locating from two previously drilled holes, drill remaining wearplate holes into D3391-021.

15- Locating from two fwd wearplate holes drill remaining 6 wearplate holes in D3391-021 using DT8937

16- Open 2 fwd wearplate holes in D3391-023 to .250" dia.

17- counterbore two aft wearplate holes in D3391-021 as per dwg

18- Open 12 wearplate holes in D3391-021 to 0.297" dia.

19-Deburr and blow out all chips from inside tube

W/O:		WORK ORDER CHANGES					
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Required Date: 2/7/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

110



QC

Quality Control

Operation
Description

QC5- Inspect part completeness to step on W/O

Set Up/
Run Hours

0.00

S 11/02/11

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

①

3E 11/02/11

130



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

②

3E 11/02/11

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

140



Skidtubes

Operation
Description

Skidtubes

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Skidtubes

Skidtubes

Memo

0.00

- 1-Open float bag holes as per dwg
- 2-C'sink float bag holes as per dwg
- 3- Prepare tube for welding
- 4-Bond web in place as per Dwg D3391 & QSI 015.

Adhere for 12 hours)
A/R Sikaflex exp: 09/2011
batch#: 116040

150



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

160



Skidtubes

Skidtubes

0.00

Memo

0.00

- 1-Weld crossbolt spacer as per dwg D3391 & QSI 004
- 2-grind weld flush

A/R 116577

1 8 BE11/02/22

11-2-23

BE11/03/03

W/O:		WORK ORDER CHANGES					
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Item ID: D3391-023

Accept



Setup Start



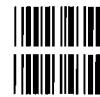
Revision ID:

Stop



Item Name: Mid Tube Assembly

Start Date: 2/7/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/7/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

170

QC10- Inspect visual per QSI004- ground welds

0.00

Sub 3/04

0.00



QC

Memo

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00

Sub 3/04

0.00



QC

Memo

Quality Control

185

Pressure Wash per QSI005 4.3

0.00

0.00



HandFinish

Memo

Hand Finishing

AND REALODINE AS PER PAR09-043

1 BL 11-3-2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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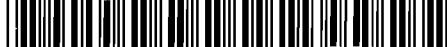
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Item ID: D3391-023**Accept****Setup****Start****Revision ID:****Item Name:** Mid Tube Assembly**Stop****Start Date:** 2/7/2011 **Start Qty:** 1.00**Cust Item ID:****Required Date:** 2/7/2011 **Req'd Qty:** 1.00**Customer:****Reference:****Approvals:** Process Plan:**Date:****Tooling:****Date:****Run****Start**

QC:

Date:**SPC (Y/N):****Date:****Stop****Sequence ID/
Work Center ID**

190



Powdercoat

**Operation
Description**

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

**Set Up/
Run Hours**

0.00

Tool ID**Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

Powder Coating

M15951

Memo

START TIME: 11:50
OVEN TEMPERATURE: 320
FINISH TIME: 12:30

200



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

1

BF 11-8-16

8 M 103/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 66144

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Item ID: D3391-023**Accept****Setup Start****Revision ID:****Stop****Item Name:** Mid Tube Assembly**Start Date:** 2/7/2011 **Start Qty:** 1.00**Cust Item ID:****Required Date:** 2/7/2011 **Req'd Qty:** 1.00**Customer:****Reference:****Approvals:** **Process Plan:****Date:****Tooling:****Date:****Run Start****QC:****Date:****SPC (Y/N):****Date:****Stop****Sequence ID/
Work Center ID**

210



Skidtubes

**Operation
Description**

Skidtubes

**Set Up/
Run Hours**

0.00

Tool ID**Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

Skidtubes

Memo

0.00

1- Insert D3391-021 into D3391-23

2- insert T-pins into first and third fwd saddle holes

3- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as per DSI 9364

4- remove T-pins and locate DT9415 from first and third crossbolt hole using T-pins and clekos

5- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". Remove DT9415

6- deburr, re-alodine and blow out chips

7- press fit D3591-1 spacers using DT9416 starting from 0.500" side

220



QC5- Inspect part completeness to step on W/O

0.00

QC

Quality Control

Memo

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Item ID: D3391-023**Accept****Setup Start****Revision ID:****Item Name:** Mid Tube Assembly**Stop****Start Date:** 2/7/2011 **Start Qty:** 1.00**Cust Item ID:****Required Date:** 2/7/2011 **Req'd Qty:** 1.00**Customer:****Reference:****Approvals:** **Process Plan:****Date:****Tooling:****Date:****Run Start****QC:****Date:****SPC (Y/N):****Date:****Stop****Sequence ID/
Work Center ID****Operation
Description****Set Up/
Run Hours****Tool ID****Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

230



HandFinishing

0.00

1 φ 11/03/17

HandFinish

Memo

0.00

Hand Finishing

Install Inserts as per Dwg

240



QC5- Inspect part completeness to step on W/O

0.00

S u l o 3 / 1 7

QC

Quality Control

Memo

0.00

250

Identify as per dwg & Stock Location: W0 B648079

0.00

Packaging

Packaging

Memo

φ 11/03/17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
Description

260

QC21- Final Inspection - Work Order Release



QC

Quality Control

Set Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

0.00

Memo

0.00

11/3/17

11-03-17

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Picklist Print

Monday, February 07, 2011 11:08:18 AM

Page 1
2

Work Order ID: 66144



Parent Item: D3391-023



Parent Item Name: Mid Tube Assembly

Start Date: 2/7/2011

Required Date: 2/7/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP A:05.10.20: New Issue KJ/EC

IPP B:06.02.10:ECN773 dwg rev.D EC

IPP C 07.03.20 rev F dwg EC

IPP D 07.03.28 re-format EC

IPP E 07.10.31 ecn 1053P EC

IPP Rev:F ECN 1056 07-11-13 DD verified by: EC

IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC

IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC

IPP Rev:I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP

Rev:J add in seq 140 expire date & b# sikaflex DD 10.02.17 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D2500-I-100



Skidtube Extrusion

Manufactured	No	100	Each	110.0000	1	1
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Location	Loc Qty	Loc Code
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LG	110	
37065	27	
50251	83	

(Signature) 11-2-11

D3391-021



Fwd Tube Assembly

Manufactured	No	100	Each	0.0000	1	1
--------------	----	-----	------	--------	---	---

B61662	140
--------	-----

(Signature) 11-2-11

D3389-I



Web

Manufactured	No	140	Each	6.0000	1	1
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Location	Loc Qty	Loc Code
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LG	9	
63343	1	
ST055	5	
65989	5	

(Signature) 8E 11/02/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Picklist Print

Page 2

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Work Order ID: 66144



Parent Item: D3391-023



Parent Item Name: Mid Tube Assembly

Start Date: 2/7/2011

Required Date: 2/7/2011

D3681-1



Manufactured

No

160

Each

41.0000

5

5



BE 1/03/03

Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	41	
56802	14	
57656	12	
63321	5	
64620	10	

265990

(x5)

D3591-1



Manufactured

No

210

Each

31.0000

2

2



Bushing

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST072	31	
47121	2	
<u>57350</u>	29	

11/03/17

ALS4-1032-130



Purchased

No

230

Each

647.0000

20

20



Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
PKG11	476	
114723	476	
ST281	36	
116049	36	
ST282	96	
110511	10	
115911	86	
ST381	39	
114654	39	

M 116864

x20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

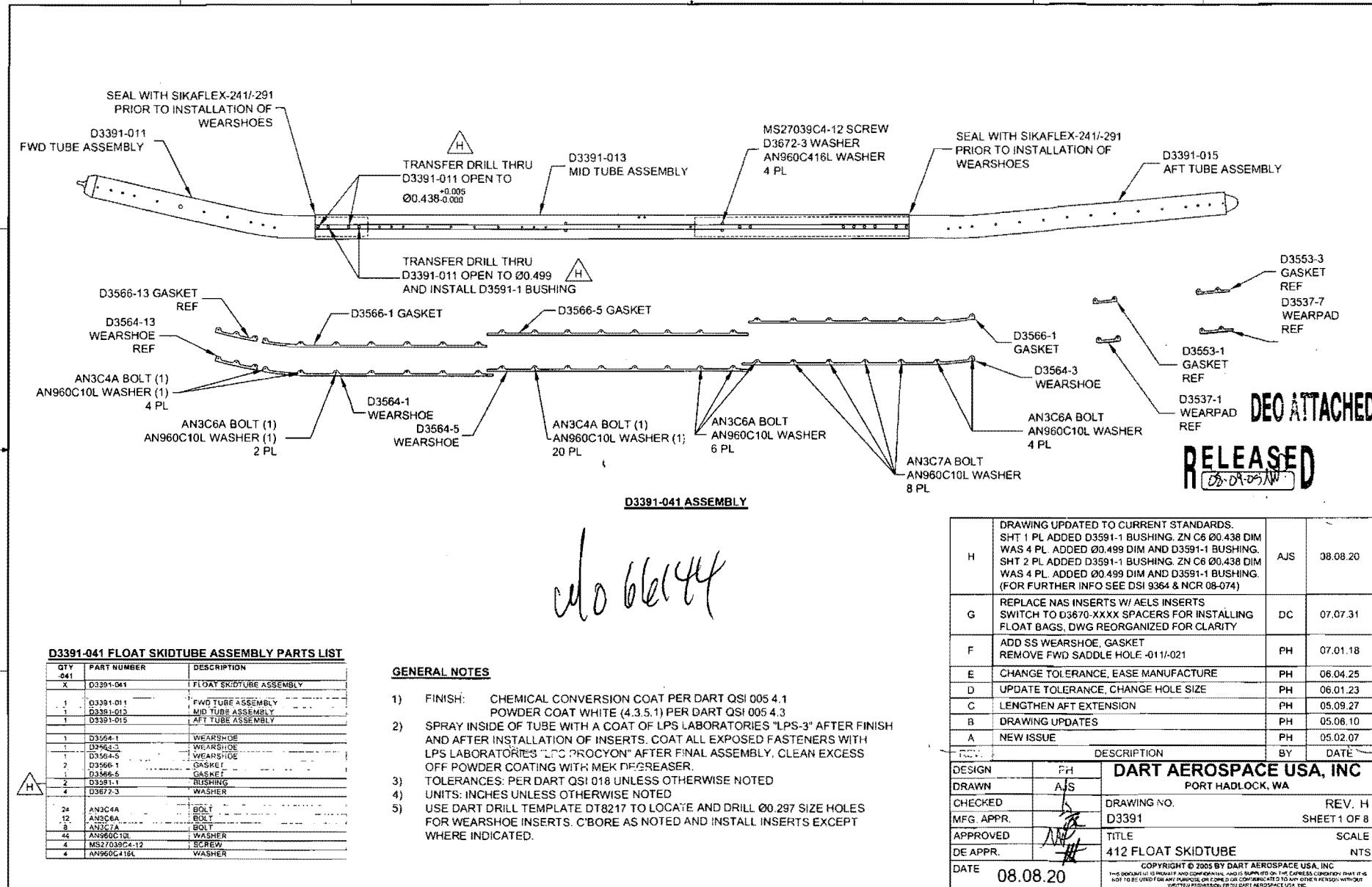
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8 7 6 5 4 3 2 1



H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø.438 DIM WAS 4 PL ADDED Ø.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø.438 DIM WAS 4 PL ADDED Ø.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DS1 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS. DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG APPR.		D3391	SHEET 1 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE USA, INC. IT IS LOANED TO THE CARRIER AND IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

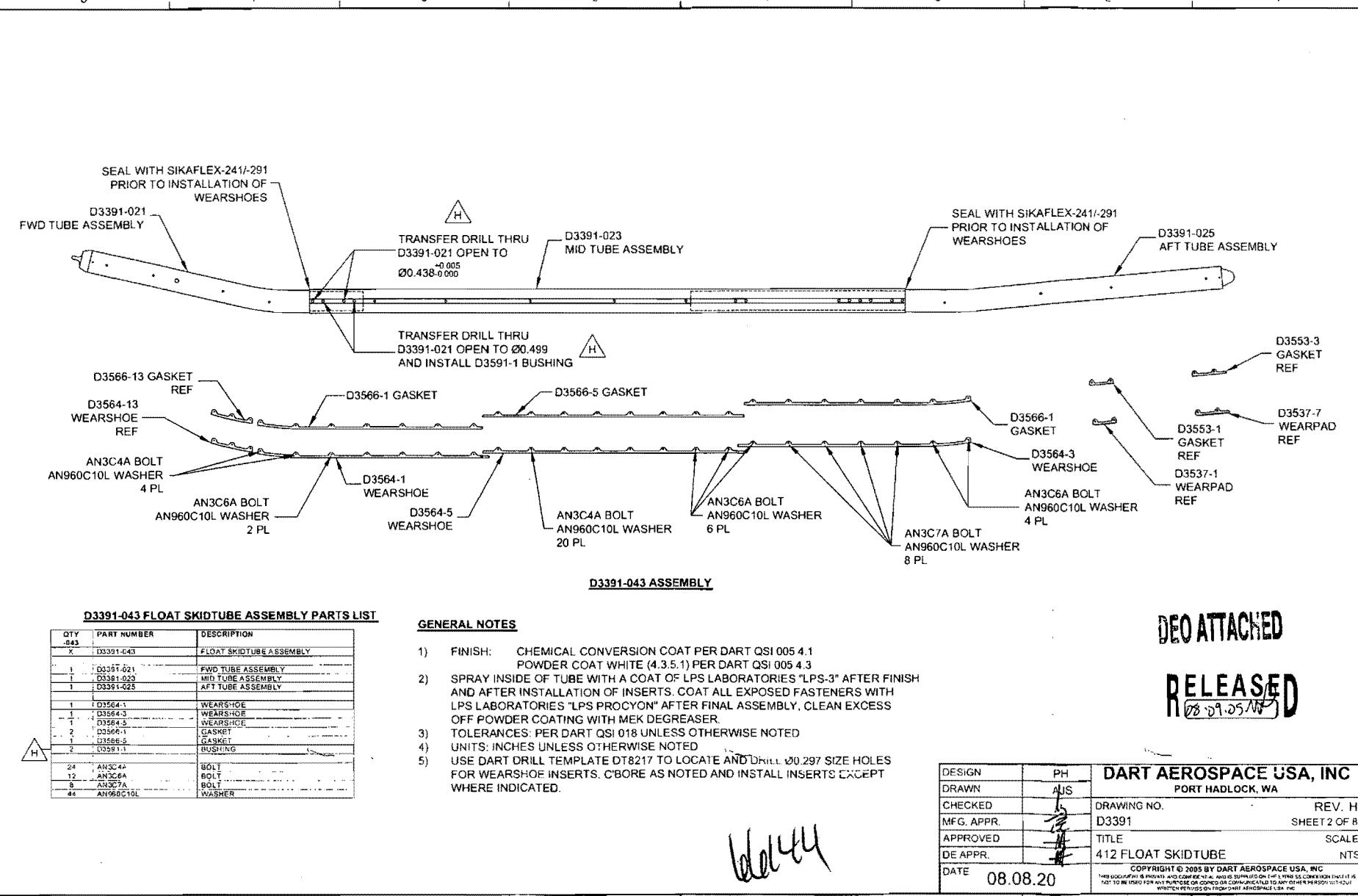
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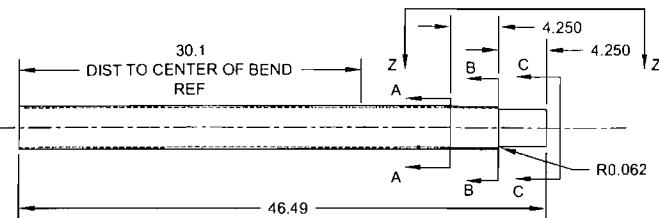
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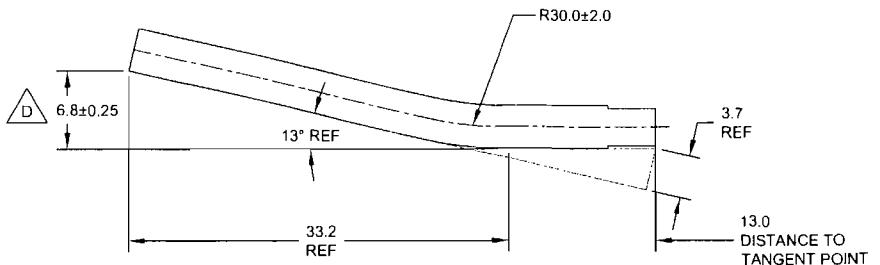
NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

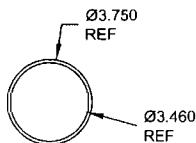
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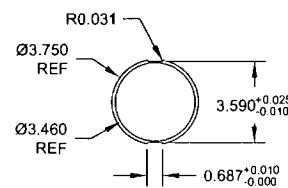
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



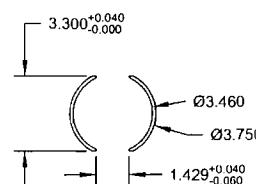
D3391-011-021 BENDING DETAIL
(MAKE FROM D3391-1)



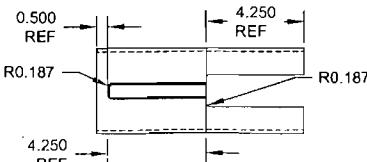
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

C

B

A

D

C

B

A

DETACHED

RELEASED
2020-08-08

DESIGN	PH	DART AEROSPACE USA, INC
DRAWN	AJS	PORT HADLOCK, WA
CHECKED	<i>[Signature]</i>	DRAWING NO. REV. H
MFG. APPR.	<i>[Signature]</i>	D3391 SHEET 3 OF 8
APPROVED	<i>[Signature]</i>	TITLE SCALE
DE APPR.	<i>[Signature]</i>	412 FLOAT SKIDTUBE NTS
DATE	08.08.20	

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8 7 6 5 4 3 2 1

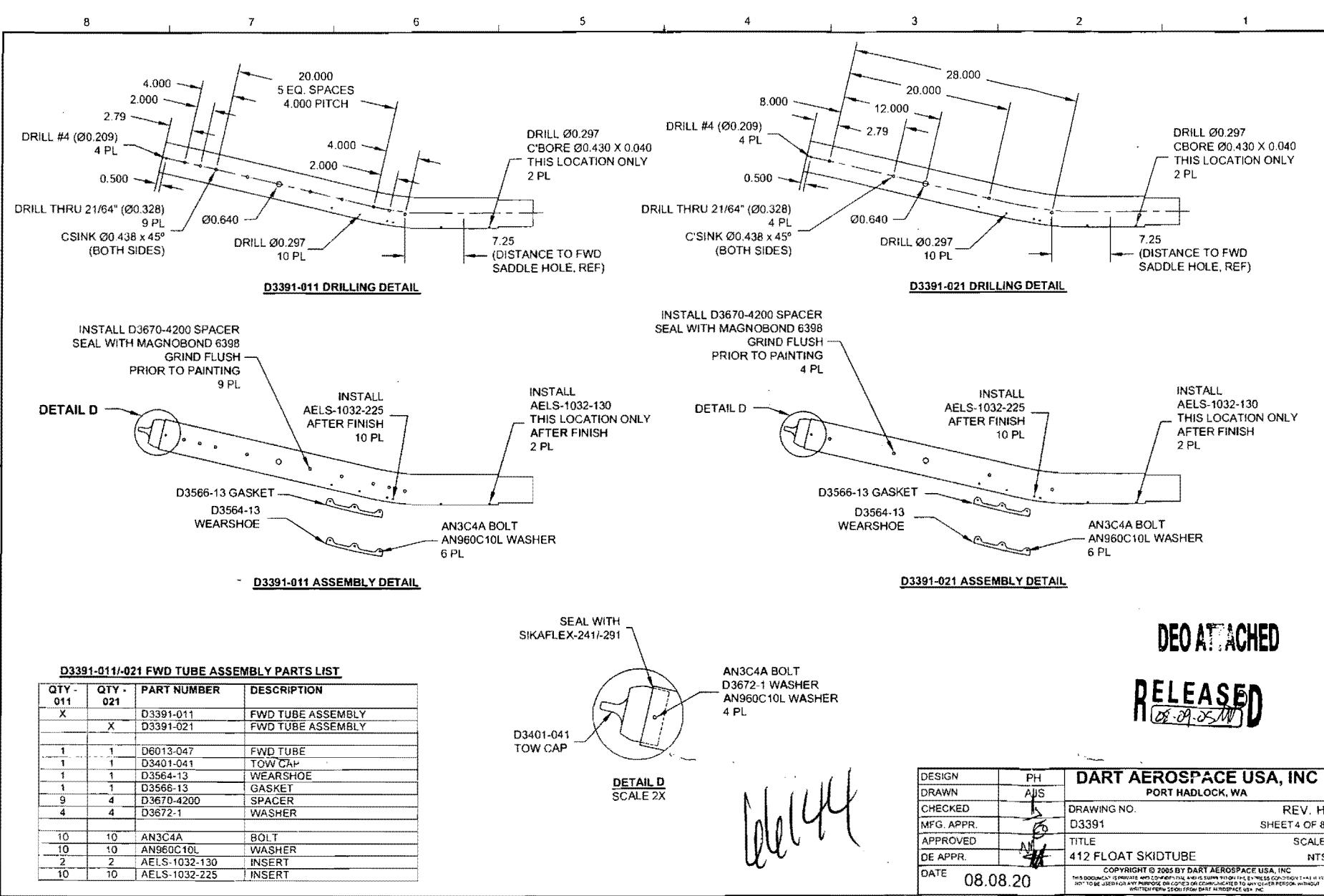
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



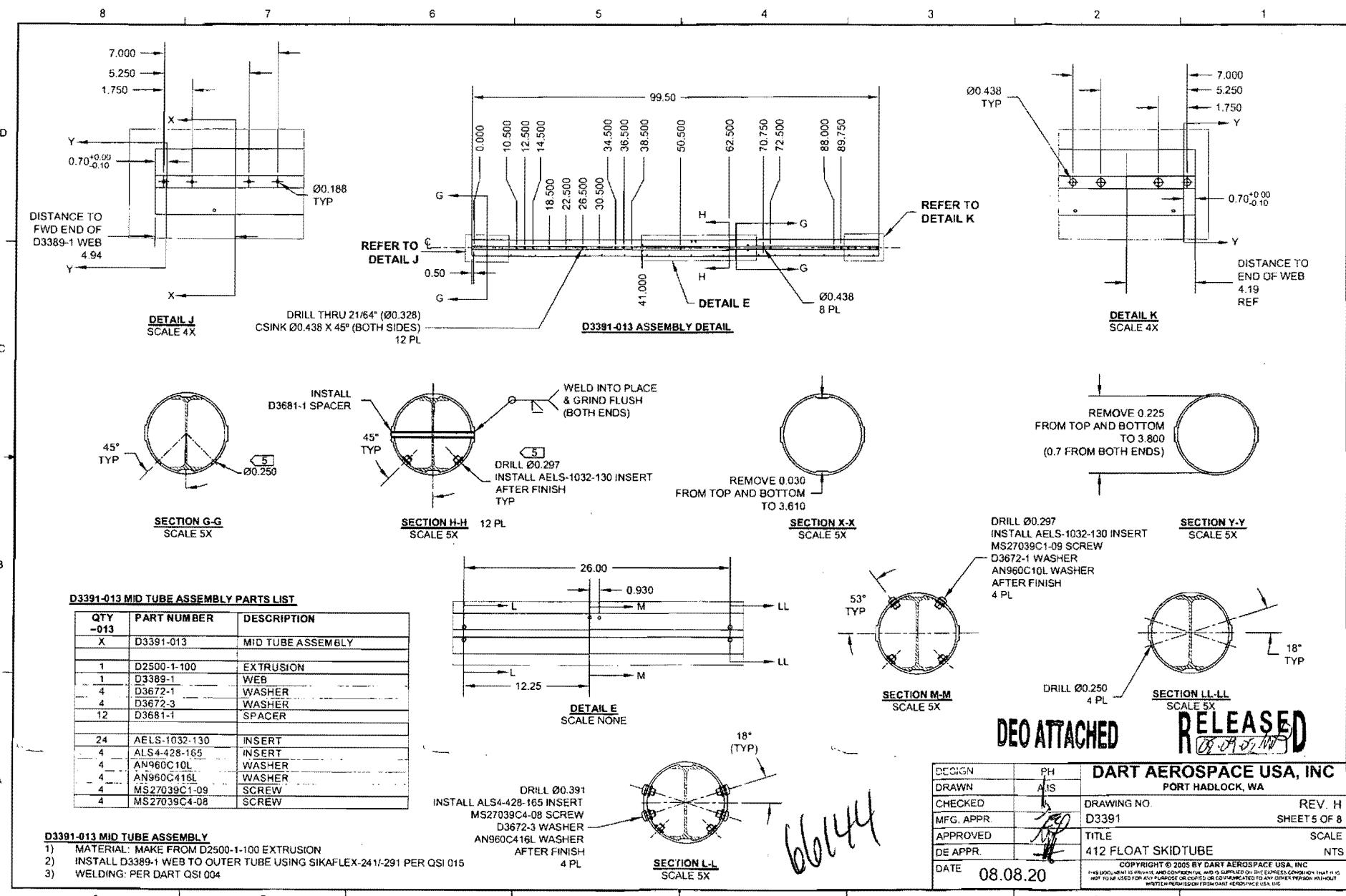
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DEO ATTACHED

SCALE 5X
RELEASED
08-09-07-NP

DESIGN	PH	DART AEROSPACE USA, INC		
DRAWN	AIS	PORT HADLOCK, WA		
CHECKED		DRAWING NO.	REV. H	
MFG. APPR.	<i>[Signature]</i>	D3391	SHEET 5 OF 8	
APPROVED	<i>[Signature]</i>	TITLE	SCALE	
DE APPR.	<i>[Signature]</i>	412 FLOAT SKIDTUBE	INTS	
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE UNLESS IT IS CONFIRMED BY ANOTHER PERSON IN WRITING		

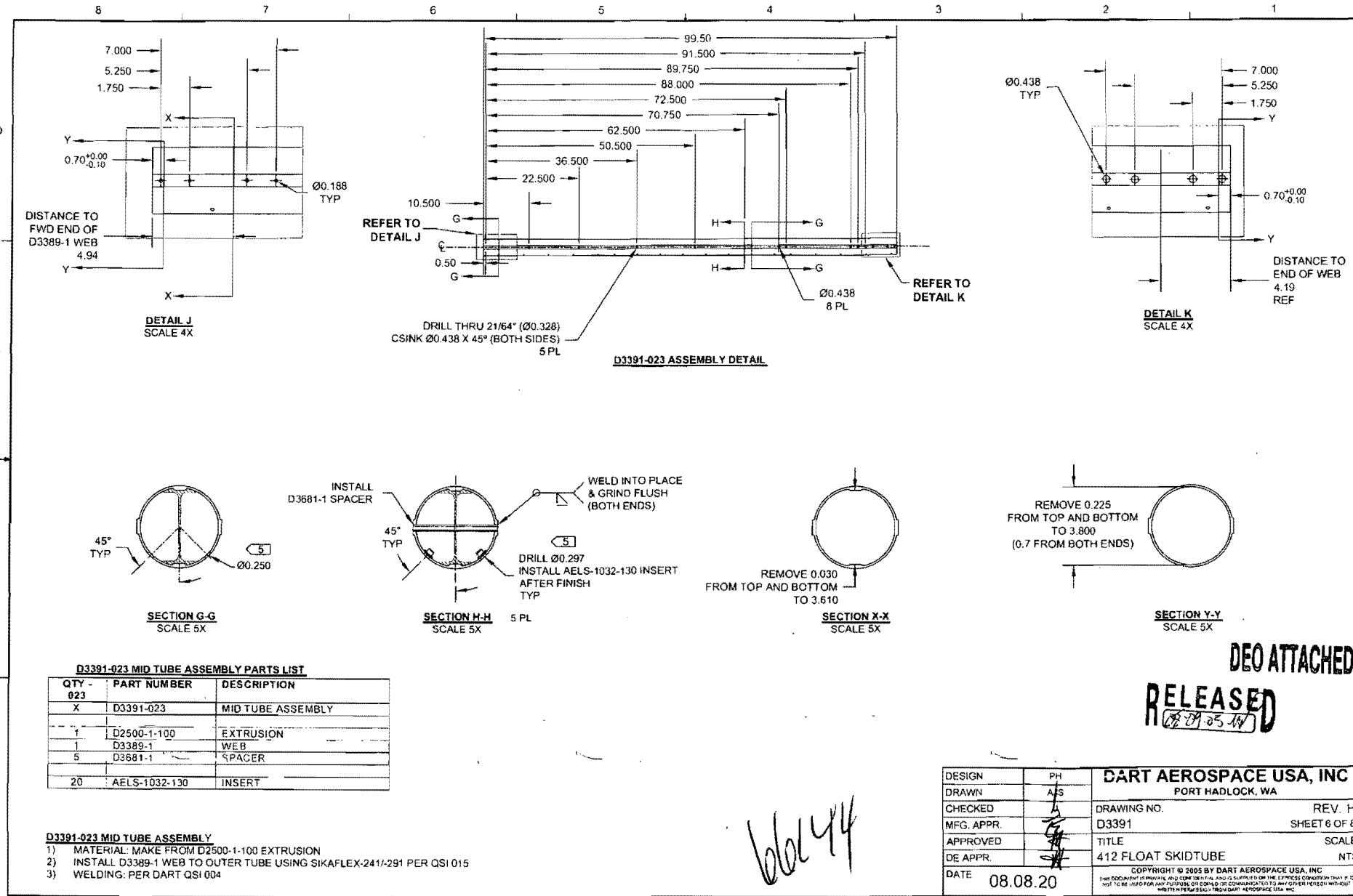
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



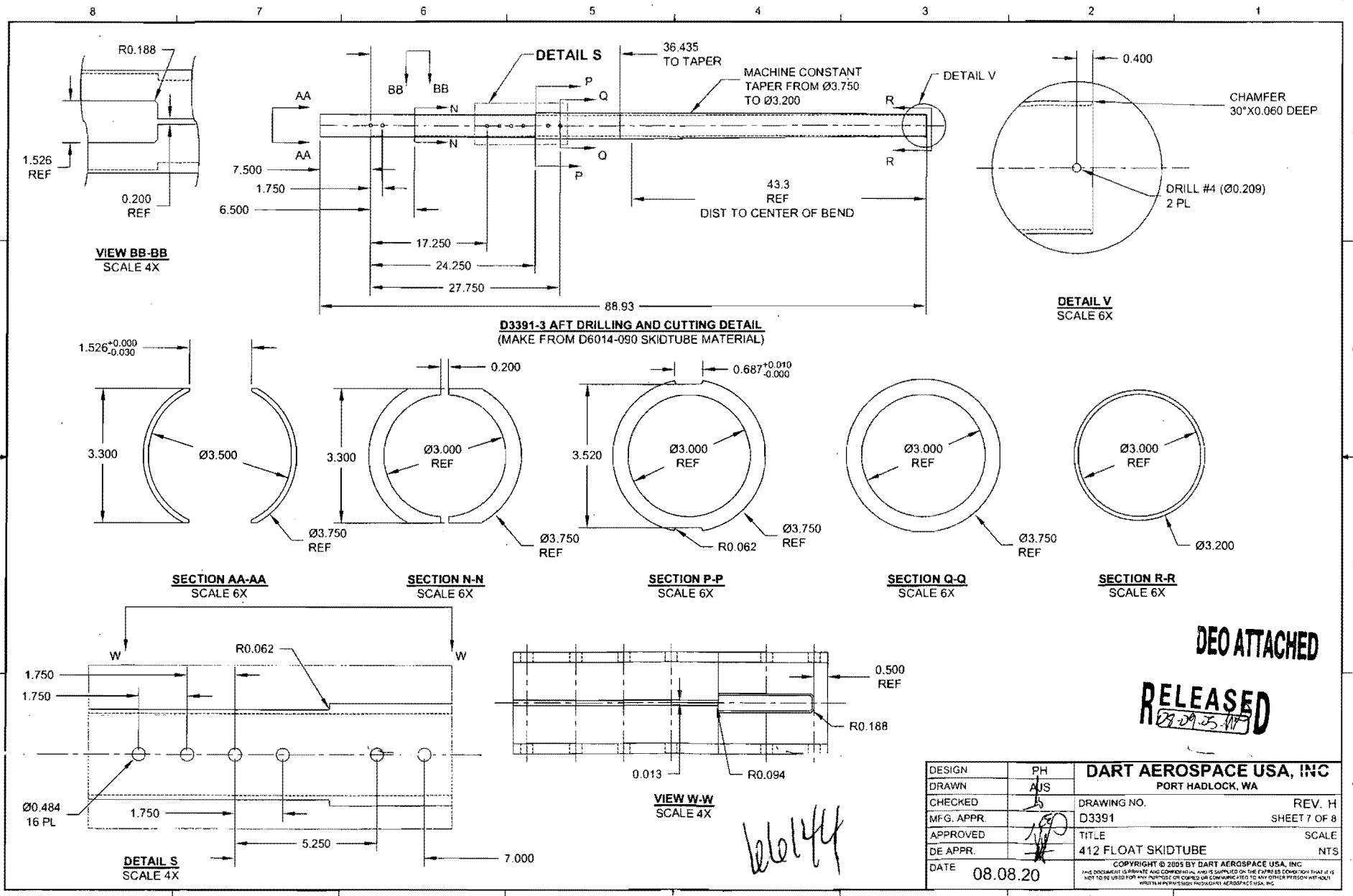
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

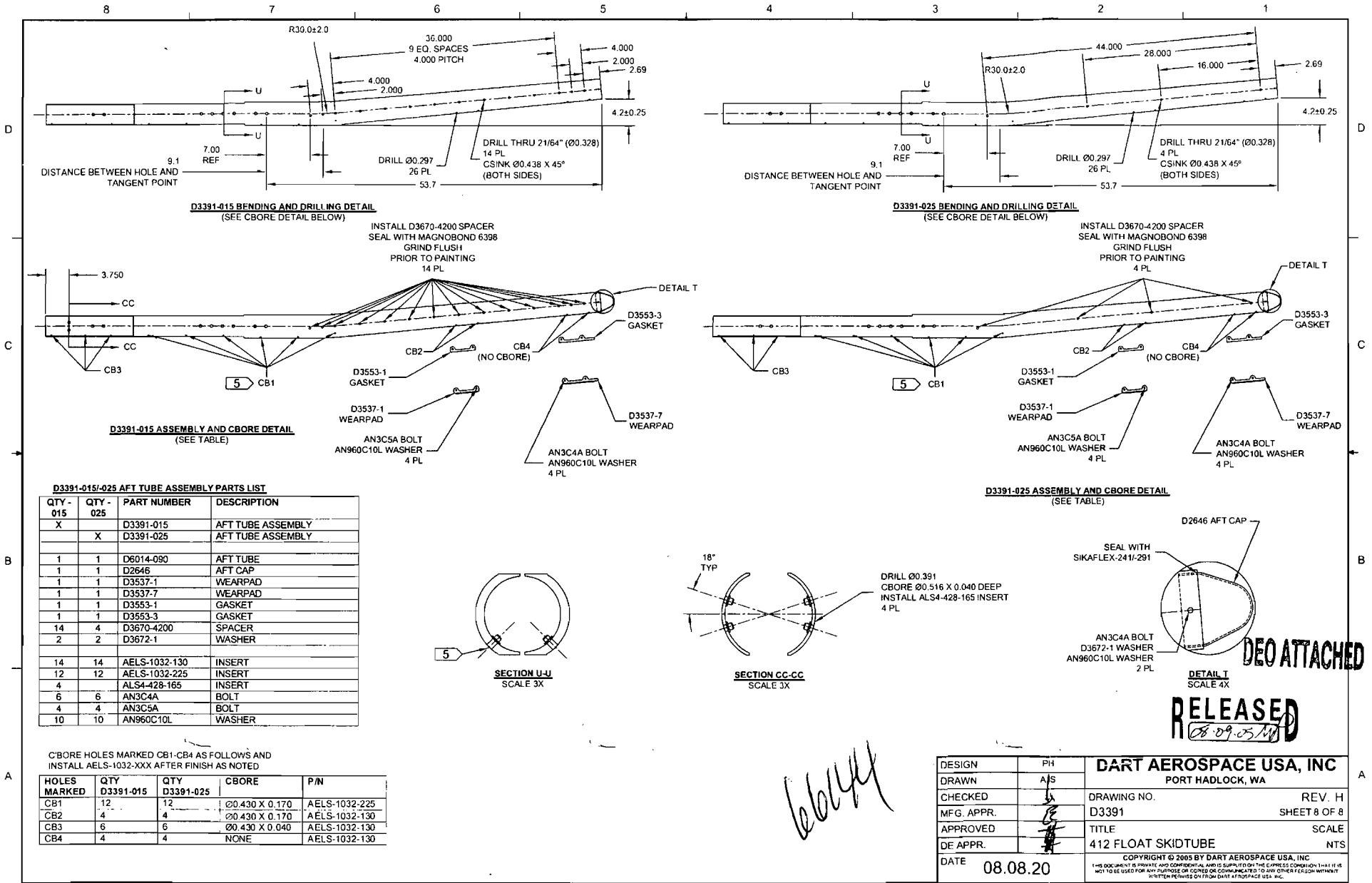
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries





DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>DP</i>	CHECKED <i>1</i>	MFG. APPR. <i>AA</i>	APPROVED <i>MP</i>	DE APPR. <i>MM</i>		
DATE 09.09.23	DATE 09.09.24	DATE 09/09/25	DATE 09/09/30	DATE 09/09/30	DATE 09/09/30	

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.~~ COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
2010-02-02

MP

W6144

NO. 244

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barklay Elliott
Job number: 65388
Part number: 13391-023
Description: mid tube
Welding Process: Tig[] Mig[]
Base material: Aluminum
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[] fail[]
Penetration: pass[] fail[]

UNACCEPTABLE

Cracks: pass[] fail[]
Undercut: pass[] fail[]
Pin holes: pass[] fail[]
Overlap (cold lap) pass[] fail[]
Porosity (surface): pass[] fail[]
Coloration: pass[] fail[]

Qualifier Pat Stevens Date of Test Coupon 11-01-18

Welder Barklay Elliott Date of Test Coupon 11-01-18

The above named individual is qualified in accordance with AWS D17.1.2001 to weld